



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

VIA ELECTRONIC MAIL
DELIVERY RECEIPT REQUESTED

James P. Brooks, Plant Manager
Aqua Illinois, Inc.
1100 Cobb Boulevard
Kankakee, Illinois 60901
JPBrooks@aquaamerica.com

Re: Finding of Violation
Aqua Illinois, Inc.
Kankakee, Illinois

Dear Mr. Brooks:

The U.S. Environmental Protection Agency is issuing the enclosed Finding of Violation (FOV) to Aqua Illinois, Inc. ("Aqua" or "you"). We find that you are violating Section 112(r)(7)(E) of the Clean Air Act, 42 U.S.C. § 7412(r)(7)(E), and certain regulatory provisions set forth in the Chemical Accident Prevention Provisions (CAPP) at 40 C.F.R. Part 68 at your Kankakee, Illinois facility.

We have several enforcement options under Section 113(a)(3) of the Clean Air Act, 42 U.S.C. § 7413(a)(3). These options include issuing an administrative compliance order, issuing an administrative penalty order, and bringing a judicial, civil, or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply, and the steps you will take to prevent future violations. In order to make the conference more productive, we encourage you to submit to us information responsive to the FOV prior to the conference date.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference.

The EPA contact in this matter is Manojkumar P. Patel. You may call him at (312) 353-3565 or email him at patel.manojkumar@epa.gov to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

Sarah Marshall
Chief, Air Enforcement and Compliance Assurance Section (MI/WI)

Enclosure

cc: Kent Mohr, Manager
Compliance Section
Bureau of Air
Illinois Environmental Protection Agency
Kent.Mohr@Illinois.gov

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6. Section 112(r)(7)(B)(ii) of the Act, 42 U.S.C. § 7412(r)(7)(B)(ii), provides that the regulations under this subparagraph shall require the owner or operator of stationary sources at which a regulated substance is present in more than a threshold quantity to prepare and implement a Risk Management Plan (RMP) to detect and prevent or minimize accidental releases of such substances from the stationary source, and to provide a prompt emergency response to any such releases in order to protect human health and the environment.

7. Pursuant to Section 112(r) of the Act, 42 U.S.C. § 7412(r), the Administrator initially promulgated a list of regulated substances, with threshold quantities for applicability, at 59 Fed. Reg. 4478 (January 31, 1994), which is codified, as amended, at 40 C.F.R. § 68.130.

8. The CAPP regulations apply to all stationary sources that have more than a threshold quantity of a regulated substance in a process. The List of Regulated Toxic Substances and Threshold Quantities for Accidental Release Prevention is codified at 40 C.F.R. § 68.130. Procedures to determine whether a threshold quantity of a regulated substance is present at a stationary source are codified at 40 C.F.R. § 68.115.

9. Section 112(r)(7)(E) of the Act, 42 U.S.C. § 7412(r)(7)(E), provides that after the effective date of any regulation or requirement promulgated pursuant to Section 112(r) of the Act, it shall be unlawful for any person to operate any stationary source in violation of such regulation or requirement.

B. Chemical Accident Prevention Provisions

(a) Applicability

10. Section 68.10(a) of CAPP provides, in part, that the owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 C.F.R. § 68.115, shall comply with the requirements of CAPP no later than the date on which a regulated substance is first present above a threshold quantity in a process.

11. Section 68.3 of CAPP provides that “regulated substance” means any substance listed pursuant to Section 112(r)(3) of the Act at 40 C.F.R. § 68.130.

12. Table 1 to Section 68.130 of CAPP lists chlorine as a regulated toxic substance with a threshold quantity of 2,500 pounds.

13. Section 68.3 of CAPP provides that “process” means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances, or combination of these activities. For purposes of this definition, a single process includes any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release. A “covered process” means a process that has a regulated substance present in more than a threshold quantity as determined under 40 C.F.R. § 68.115.

14. Section 68.10(i) of CAPP provides, in part, that a covered process is subject to Program 3 requirements if the process does not meet the requirements of 40 C.F.R. § 68.10(g) and if either of the following conditions is met: (1) the process is in NAICS code 32211, 32411, 32511, 325181, 325188, 325192, 325199, 325211, 325311, or 32532; or (2) the process is subject to the U.S. Occupational Safety and Health Administration (OSHA) process safety management standard, 29 C.F.R. § 1910.119.

15. Section 68.12(a) and (d) of CAPP identify CAPP requirements that the owner or operator of a stationary source with a process subject to Program 3 shall meet, which include, among others, requirements regarding development and implementation of a management system, conducting a hazard assessment, implementation of prevention requirements, development and implementation of an emergency response program, and submittal of a single RMP.

(b) Process Safety Information

16. Section 68.65(a) of CAPP provides that the owner or operator of a stationary source with a process subject to Program 3 shall complete a compilation of written process safety information before conducting any process hazard analysis required by the rule. The compilation of written process safety information is to enable the owner or operator and the employees involved in operating the process to identify and understand the hazards posed by those processes involving regulated substances. This process safety information shall include information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process.

17. Section 68.65(d)(1) of CAPP states that the information pertaining to the equipment in the process shall include: (i) materials of construction; (ii) piping and instrument diagrams (P&ID's); (iii) electrical classification; (iv) relief system design and design basis; (v) ventilation system design; (vi) design codes and standards employed; (vii) materials and energy balances for processes; and (viii) safety systems.

(c) Process Hazard Analysis

18. Section 68.67(a) of CAPP provides that the owner or operator of a stationary source with a process subject to Program 3 shall perform an initial process hazard analysis (hazard evaluation) on processes covered by this part.

19. Section 68.67(e) of CAPP provides, in part, that the owner or operator shall establish a system to promptly address the hazard analysis team's findings and recommendations, assure that the recommendations are resolved in a timely manner and that the resolution is documented, develop a written schedule of when actions are to be completed, and complete actions as soon as possible.

(d) Operating Procedures

20. Section 68.69(a) of CAPP provides that the owner or operator of a stationary source with a process subject to Program 3 shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information.

21. Section 68.69(b) of CAPP provides that the operating procedures shall be readily accessible to employees who work in or maintain a process.

(e) Mechanical Integrity

22. Section 68.73(b) of CAPP provides that the owner or operator of a stationary source with a process subject to Program 3 shall establish and implement written procedures to maintain the on-going integrity of process equipment, as identified at 40 C.F.R. § 68.73(a).

23. Section 68.73(c) of CAPP provides that the owner or operator shall train each employee involved in maintaining the on-going integrity of process equipment in an overview of that process and its hazards and in the procedures applicable to the employee's job tasks to assure that the employee can perform the job tasks in a safe manner.

24. Section 68.73(d)(1) of CAPP provides that inspections and tests shall be performed on process equipment.

25. Section 68.73(d)(2) of CAPP provides that inspection and testing procedures shall follow recognized and generally accepted good engineering practices.

26. Section 68.73(d)(3) of CAPP provides that the frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.

27. Section 68.73(d)(4) of CAPP provides that the owner or operator shall document each inspection and test that has been performed on process equipment. The documentation shall identify the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test.

(f) Management of Change

28. Section 68.75(a) of CAPP provides that the owner or operator of a stationary source with a process subject to Program 3 shall establish and implement written procedures to manage changes (except for "replacements in kind") to process chemicals, technology, equipment, and procedures; and, changes to stationary sources that affect a covered process.

29. Section 68.75(b) of CAPP provides that the procedures shall assure that certain considerations are addressed prior to any change, including, but not limited to, the necessary time period for the change and the authorization requirements for the proposed change.

30. Section 68.75(c) of CAPP provides that employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall be informed of, and trained in, the change prior to start-up of the process or affected part of the process.

31. Section 68.75(d) of CAPP provides that if a change covered by this paragraph results in a change in the process safety information required by 40 C.F.R. § 68.65, such information shall be updated accordingly.

32. Section 68.75(e) of CAPP provides that if a change covered by this paragraph results in a change in the operating procedures or practices required by 40 C.F.R. § 68.69, such procedures or practices shall be updated accordingly.

(g) Pre-startup Review

33. Section 68.77(a) of CAPP provides that the owner or operator of a stationary source with a process subject to Program 3 shall perform a pre-startup safety review for new stationary sources and for modified stationary sources when the modification is significant enough to require a change in the process safety information.

34. Section 68.77(b)(1) of CAPP provides that the pre-startup safety review shall confirm that prior to the introduction of regulated substances to a process construction and equipment is in accordance with design specifications.

(h) Compliance Audits

35. Section 68.79(a) of CAPP provides that the owner or operator of a stationary source with a process subject to Program 3 shall certify that it has evaluated compliance with the provisions of this subpart at least every three years to verify that procedures and practices developed under this subpart are adequate and are being followed.

36. Section 68.79(d) of CAPP provides that the owner or operator shall promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.

(i) Employee Participation

37. Section 68.83(c) of CAPP provides that the owner or operator of a stationary source with a process subject to Program 3 shall provide to employees and their representatives access to process hazard analyses and to all other information required to be developed under this rule.

Statement of Facts and Explanation of Violations

(a) Applicability

38. Aqua owns and operates a single-site chlorinated water treatment facility at 1100 Cobb Blvd, Kankakee, Illinois (“the Facility”), which began operation in or around January 2012.

39. Aqua used, stored, handled, and moved multiple railcars containing chlorine (CAS#7782-50-5), a regulated substance, at the Facility in amounts over the chlorine threshold quantity of 2,500 lbs.

40. Aqua’s use, storage, handling, and movement of the chlorine at the Facility is a “process,” as that term is defined at 40 C.F.R. § 68.3.

41. Aqua is a “person,” as that term is defined at Section 302(e) of the Act, 42 U.S.C. § 7602(e).

42. The Facility is a “stationary source,” as that term is defined at 40 C.F.R. § 68.3.

43. Aqua is subject to the requirements of CAPP in accordance with 40 C.F.R. § 68.10(a) and the requirements of Program 3 in accordance with 40 C.F.R. § 68.10(i).

44. On August 5, 2019, authorized representatives of EPA conducted a compliance inspection at the Facility to determine compliance with the Risk Management Program regulations.

45. Aqua provided numerous documents prior to and during the August 5, 2019 inspection. These documents were related to various aspects of its RMP, including, but not limited to, process safety information, process hazard analysis, operating procedures, mechanical integrity, management of change, compliance audits, pre-startup review, and employee participation.

(b) Process Safety Information

46. Aqua did not compile written process safety information regarding the material of construction for the chlorine cylinders, yokes and pigtails, chlorine pipelines, expansion tanks, valves, pressure gauges, chlorine gas filters, rupture discs, pressure relief valves, and pressure switches.

47. Aqua did not document the relief system design and design basis for the safety relief valves protecting the evaporators.

48. Aqua did not document the ventilation system design for the chlorine feed room and the chlorinator room.

49. Aqua did not document the electrical classification for the chlorine feed room and the chlorinator room.

50. Aqua's failure to document information pertaining to equipment in the chlorine feed system, specifically: P&ID's, electrical classification, design codes and standards employed, and safety systems, is a violation of 40 C.F.R. § 68.65(d)(1).

(c) Process Hazard Analysis

51. Aqua conducted the most recent process hazard analysis through its consultant, Applied EHS Management, Inc. on April 22, 2019, during which the process hazard analysis team reviewed recommendations from the previous process hazard analysis conducted in 2014. The Facility had eight open recommendations from the 2014 process hazard analysis, and one of the open recommendations has been open since a prior process hazard analysis conducted in 2009.

52. Aqua's failure to promptly address the process hazard analysis team's findings and recommendations, assure that the recommendations were resolved in a timely manner and that the resolution was documented, and complete actions as soon as possible, is a violation of 40 C.F.R. § 68.67(e).

(d) Operating Procedures

53. Aqua revised in 2019 the operating procedures technicians follow when they change out chlorine cylinders to include new equipment, personal protective equipment updates, warnings, and use of vacuum gas temperature feed.

54. On August 5, 2019, EPA toured the Facility. During EPA's tour of the chlorine feed room on August 5, 2019, the technician provided a copy of the operating procedures that was a different than the revised 2019 operating procedures.

55. Aqua's failure to make the proper operating procedures readily accessible to chlorine feed room technicians is a violation of 40 C.F.R. § 68.69(b).

(e) Mechanical Integrity

56. During the August 5, 2019 inspection, Aqua provided EPA with a recently-developed and the first and only maintenance schedule for the equipment associated with the chlorine feed system, excluding the chlorine cylinders. Aqua informed EPA that it was in the process of loading the

maintenance schedule into a computer-based system to track all inspections and tests performed on the equipment.

57. Aqua's failure to establish and implement written procedures for the chlorine feed system to maintain the ongoing integrity of process equipment is a violation of 40 C.F.R. § 68.73(b).

58. Aqua did not provide training for employees involved in maintaining the on-going integrity of the chlorine feed system and other process equipment.

59. Aqua's failure to train each employee involved in maintaining the on-going integrity of the chlorine feed system, its hazards, and its procedures applicable to the employee's job tasks to assure that the employee can perform the job tasks in a safe manner, is a violation of 40 C.F.R. § 68.73(c).

60. Aqua did not provide inspection and/or test records for the equipment associated with the chlorine feed system. Aqua did not provide any calibration records for the chlorine sensor or any maintenance records for the chlorine scrubber.

61. Aqua installed the chlorine sensor in July 2015. However, according to the chlorine sensor's manufacturer, the life of the chlorine sensor is only two years.

62. Aqua has not replaced the three expansion tanks for more than five years. However, according to the manufacturer's recommendation, the tanks should be replaced annually under normal operating conditions.

63. Aqua has the capability to feed chlorine gas directly to the chlorinators, but the line connected to the chlorinator was corroded and tagged "DO NOT OPERATE" on June 31, 2019. Aqua did not have a corrosion prevention program for inspecting pipelines and equipment for corrosion prior to the maintenance program provided during the inspection.

64. Aqua's failure to perform inspections and tests on process equipment is a violation of 40 C.F.R. § 68.73(d)(1).

65. Aqua's failure to perform inspection and testing procedures following recognized and generally accepted good engineering practices is a violation of 40 C.F.R. § 68.73(d)(2).

66. Aqua's failure to perform inspections and tests on process equipment at a frequency consistent with applicable manufacturers' recommendation and good engineering practices, or more frequently, if necessary, is a violation of 40 C.F.R. § 68.73(d)(3).

67. Aqua's failure to document each inspection and test that was performed on the process equipment is a violation of 40 C.F.R. § 68.73(d)(4).

(f) Management of Change

68. Aqua proposed a modification to the design of the chlorine system, including the addition of a new evaporator and chlorinator and the replacement of an existing evaporator and chlorinator, on April 15, 2013.

69. Aqua prepared modification form MOC-K3WTP-14-01 for the proposed change prior to completion of modification activities in June 2015. MOC-K3WTP-14-01 did not address the technical

basis for the proposed change, the impact of the change on safety and health, the modifications to operating procedures, or the necessary time period required for the change prior to any change.

70. Aqua did not train its technicians on the operation of the new evaporator and chlorination system prior to the start-up of the new evaporator and chlorination system.

71. Aqua did not update the process safety information (P&ID's, material of construction, design basis of relief valve) for the evaporator and chlorination system.

72. Aqua did not update the operating procedures for the evaporator and chlorination system until June 2019, although the modification was completed in June 2015.

73. Aqua's failure to address the technical basis for the proposed change (new evaporator and chlorination system), the impact of the change on safety and health, and modifications to operating procedures prior to the proposed change, is a violation of 40 C.F.R. § 68.75(b)(1)-(3).

74. Aqua's failure to assure that the necessary time period for the change is addressed prior to making a change is a violation of 40 C.F.R. § 68.75(b)(4).

75. Aqua's failure to train and inform its employees about the new chlorination system prior to start-up of the process or affected part of the process is a violation of 40 C.F.R. § 68.75(c).

76. Aqua's failure to update the process safety information (P&ID's, material of construction, design basis of relief valve) of the new equipment is a violation of 40 C.F.R. § 68.75(d).

77. Aqua's failure to update operating procedures that resulted from installation of the new process equipment is a violation of 40 C.F.R. § 68.75(e).

(g) Pre-startup Safety Review

78. Aqua did not complete Form 7a for the pre-startup safety review for the modification to the chlorine feed system until 2019. The modification to the chlorine feed system was completed on June 25, 2015.

79. Aqua's failure to confirm that the construction and equipment is in accordance with the design specifications prior to the introduction of regulated substances is a violation of 40 C.F.R. § 68.77(b)(1).

(h) Compliance Audits

80. Aqua has not addressed five recommendations from the most recent compliance audit in June 2018.

81. Based on the 2018 compliance audit report, Aqua did not address four recommendations from the preceding 2012 compliance audit.

82. Aqua's failure to promptly determine and document an appropriate response to each of the findings of the compliance audits, and document that deficiencies had been corrected is a violation of 40 C.F.R. § 68.79(d).

(i) Employee Participation

83. Aqua was unable to provide any records that demonstrate that technicians were informed about the recommendations of the compliance audits.

84. Aqua's failure to demonstrate that technicians were informed about the recommendations of the compliance audits and failure to provide access to process hazard analyses and other information is a violation of 40 C.F.R. § 68.83(c).

(j) Violation of the CAA

85. Pursuant to Section 112(r)(7)(E) of the Act, the above-described violations of the regulations and requirements of 40 C.F.R. Part 68 are violations of the Act.

Michael D. Harris
Division Director
Enforcement and Compliance Assurance Division